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# The PSYCHOLOGICAL RECORD . . . . .

FEBRUARY, 1939  
Vol. III No. 1

THE VALIDITY OF MAIL-BALLOT POLLS

DON CAHALAN AND NORMAN C. MEIER



THE PRINCIPIA PRESS, INC.  
BLOOMINGTON, INDIANA

*Price of this number, 25 cents*

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## THE VALIDITY OF MAIL-BALLOT POLLS\*

BY DON CAHALAN AND NORMAN C. MEIER

*University of Iowa*

The trend of polling practice seems now to be toward direct contact with the respondent, suggesting uncertainty toward the indirect-contact or mail-ballot plan. Mere assumption of the superiority of the former leaves unexplained the fact that the *Digest* poll was singularly successful prior to 1936 while employing the mail-ballot exclusively. The present investigation was undertaken to discover, within limits of available resources, the reasons for this reversal with a view toward identifying factors that may contribute toward error in any type of indirect poll.

Popular explanations included a great "protest vote" in 1936 and failure to reach certain social strata. Those were scouted by the poll sponsors,<sup>1</sup> who pointed out that identical sampling methods were used for both the 1932 and 1936 elections. Applying Robinson's criterion of validity<sup>2</sup> of the state-by-state average "spread" between plurality forecast and the actual vote, in the two elections of 1932 and 1936, a greater Republican overprediction was found in every state in 1936 and an average state error of 37% as compared to 9% in 1932. This, together with the popular guesses, indicated that a peculiar combination of circumstances must have rearranged pre-existing sources of bias inherent in the poll's method so that instead of cancelling they became cumulative in 1936.

In order to explore these sources of error two approaches were used. The first consisted of the enlistment of the services of a nation-wide interview organization.<sup>3</sup> The following questions were submitted to a nation-wide cross-section as part of the regular poll, in May, 1937. The survey resulted in 848 respondents out of 2,929 stating they had received *Digest* ballots during the 1936 campaign.

\*Recommended for publication by Dr. J. R. Kantor, January 16, 1939.

<sup>1</sup>Literary Digest, Nov. 14, 1936.

<sup>2</sup>"Recent Developments in the Straw Poll Field," (See Bibliography).

<sup>3</sup>The authors acknowledge indebtedness to Dr. George Gallup for courtesy in permitting the use of facilities of the American Institute of Public Opinion.

8. Did you receive a *Literary Digest* straw vote ballot in the Presidential campaign last fall?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Don't remember

IF ANSWER TO QUESTION 8 IS "YES," ASK 8a

- 8a. Did you send it in?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Don't remember

(IF ANSWER TO 8a IS "YES," ASK:) Did you change your mind regarding the candidate between the time you sent it in and the election?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Don't remember

(IF ANSWER TO 8a IS "NO," ASK:) Why didn't you send it in?

For which presidential candidate did you vote in the November election?

\_\_\_\_\_ Roosevelt \_\_\_\_\_ Landon \_\_\_\_\_ Thomas \_\_\_\_\_ Lemke \_\_\_\_\_ Didn't Vote

—AV+ —P+ —TY —Tel. —Car —Man —Wh

—AV —P —O —No Tel. —No car —Wh —Cl

OCCUPATION \_\_\_\_\_ Estimated Age \_\_\_\_\_

STREET \_\_\_\_\_ CITY \_\_\_\_\_

KEY: \*

OR \_\_\_\_\_ On Relief

P \_\_\_\_\_ Poor

P+ \_\_\_\_\_ Between "P" and "AV"

AV \_\_\_\_\_ Average Income

AV+ \_\_\_\_\_ Prosperous

Tel. \_\_\_\_\_ Telephone

No Tel. \_\_\_\_\_ No Telephone

WH \_\_\_\_\_ White

CL \_\_\_\_\_ Colored

TY \_\_\_\_\_

Too young to vote in  
1932; will vote for 1st  
Pres. 1940

In addition to this survey an intensive study of a representative community was undertaken for purposes of comparison. Cedar Rapids, Iowa, was chosen because its trade with a large rural area and its several important industries (cereals and meat-processing) impart both rural and urban characteristics. The *Digest* mailing list for Cedar Rapids, containing over 10,000 names of resident telephone renters, was obtained<sup>1</sup> and every fifteenth person—a total of 693—was called by telephone. Calls were repeated until all available respondents were contacted and asked the following questions:

<sup>1</sup>Through the courtesy of Mr. John Hodgins of Funk and Wagnalls.

A. This is \_\_\_\_\_ of Iowa City. I am making a survey, in connection with my work at the University of Iowa, to find out why the 1936 *Literary Digest* poll failed to work. One way of getting at this is to ask representative members of the community about their experiences. Now:

1. "Did you happen to receive a straw ballot card from the *Literary Digest* during the last presidential campaign?"

(If answer is "no" or "don't know," skip to B and then to 4)

2. (If answer is "yes") "Do you remember what you did with it?"

2a. (If not returned) "Why?"

B. It would help a great deal in this survey if you would give me a little additional information which will be kept in complete confidence. Merely for the purposes of this survey, I would like to know:

3. (If ballot had been returned) "For whom did you mark your ballot?"

4. "How did you vote in the 1932 presidential election?"

6. "What did you think of the *Digest* poll before 1936?" (Answers to this question were recorded and classified under the proper attitudinal category immediately after each interview. Examples of typical responses: *Favorable*, "They've always been very fair, I'm sure." "I thought it was a good thing." *Neutral*, "It was as accurate as anything of the sort could be, but I reserved judgment on its always being right." *Indifferent*, "Didn't think anything about it at all." "Never followed it up." *Unfavorable*, "I thought they hand-picked the Republican voters." "I figured it was propaganda; it couldn't mean anything.")

C. One other matter, merely for the purpose of classifying this data:

7. "Would you mind giving me your approximate age?"

8. "What make of car do you have? Year or model?"

9. "What is your occupation?"

These interviewees were divided into economic classes according to Institute criteria (page —) from information directly obtained and later checked with property values, credit guide ratings, and other sources.

In this survey 554 interviews were completed, except for age, in all details. Of 282 persons favoring Landon, 23 failed to vote; and of 251 preferring Roosevelt, 22 did not vote.

#### ANALYSIS OF REPORTED RETURN OF BALLOT

The *Digest* received back 23.5% of approximately ten million ballots mailed. Table I, however, discloses that 515 (61%) of the 848 persons who reported to Institute interviewers as having received ballots were likewise certain of having returned them. This apparent inconsistency is explained in Table II, which shows return

of ballots by Cedar Rapids persons on the 1936 poll mailing list: 59% of the Cedar Rapids respondents who were *aware* of receiving ballots likewise reported returning them. This is a figure comparable to the reported return of 61% mentioned above. But the reported return from the *total* number interviewed (those to whom ballots were actually mailed) in Cedar Rapids was 23.6%, practically identical with that reported for the nation. The difference represents recall versus failure to recall.

#### BIAS IN THE ORIGINAL POLL SEND-OUT

*Age bias.* In the adult population those under 45 outnumber those over 45 by roughly 48 to 26 million, or a proportion of 65 to 35 per cent. Table III indicates that in these samples of the

TABLE I  
RETURN OF BALLOT  
(Institute Survey)

Voters in 1936	Return	Non-return	Return uncertain	No ans.	Total
Roosevelt	245	166	17	3	431
Landon	239	79	14	5	337
Thomas	2	1			3
Lemke	3	1	1		5
Didn't vote	5	20	3	1	29
Too young	10	8			18
No politics	14	11			25
Total	518 (61%)				848 (100%)

TABLE II  
RECEIPT AND RETURN OF BALLOT  
(Cedar Rapids Survey)

Preference in 1936	A R-Rt	B R-NRt	C R-DKRt	D Total R	E No R	F DKR	G Total
Roosevelt	37	37	8	(82)	134	35	251
Landon	92	37	5	(134)	118	30	282
Thomas	2	1		(3)	2		5
Lemke		1		(1)	2		3
No politics		2		(2)	6	5	13
Total	131*	78	13	(222)	262	70	554

\*59% of D, 23.6% of G

Key:

R-Rt	Received ballot and returned it
R-NRt	Received ballot, but did not return it
R-DKRt	Received ballot, but uncertain as to return
Total R	Total reporting receipt of ballot
No R	Denied receiving ballot
DKR	Uncertain as to receipt of ballot

send-out these ratios were not present. An Institute survey during the campaign found 59 per cent of new voters, and a clear majority of those between the ages of 21-44, inclined toward Roosevelt; and an indication of pro-Landon majority among older voters. This trend is substantiated in Table III.

TABLE III  
AGE AND POLITICAL PREFERENCE

Years	Institute survey		Cedar Rapids N
	Roosevelt	Landon	
21-24	20 (71.4%)	8 (28.6%)	4
25-34	94 (58.7%)	66 (41.3%)	65
35-44	127 (59.6%)	86 (40.4%)	131
—Total under 45 years	401 (55%)	200 (39%)	
45-54	106 (55.5%)	85 (44.5%)	154
55 up	53 (39.6%)	81 (60.4%)	165
—Total over 45 years	325 (45%)	319 (61%)	
	726 (100%)	519 (100%)	

The median age in the general population is 39.6, whereas the median for the Cedar Rapids sample was 49. These considerations point to a considerable age bias in the *Digest* send-out. Robinson suggests<sup>1</sup> that the *Digest* list inclines toward a criterion of wealth since older people tend to have more wealth than the younger.

*Sex bias.* Men, according to the *Digest*, outnumber women on its mailing list by a proportion of 90 to 10. They vote in an approximate ratio of 60 to 40. In the Cedar Rapids survey men were found to outnumber women in a ratio of 84 to 16; they, moreover, returned a greater proportion of their ballots. Dispropor-

<sup>1</sup>Robinson, *op. cit.*

tionate sex distribution may not in itself have produced any considerable error in the 1936 poll, but on a question wherein there is a sex differential—such as prohibition—it may loom large.

*Party bias.* Since it is apparent that the 1936 *Digest* ballots went chiefly to telephone renters, three classes—farmers, laborers and relievers—would be more poorly represented in the poll at the very time they were figuring prominently in a Roosevelt plurality. Hence, a Republican bias in the send-out might be expected. A comparison of the official vote in Cedar Rapids, and of the nation, with the political preferences of ballot recipients who were interviewed does reveal a six per cent and a twelve per cent plurality, respectively. However, this over-Republicanism in the original sample is minor compared to that in the *effective sample* of ballots returned, which, averaging all states, was 37 per cent. The bulk of this error consequently must be accounted for by factors related to ballot return.

#### BIAS FROM SELECTION IN COOPERATION

*Party selection.* The relative extent to which Roosevelt and Landon adherents cooperated in returning ballots is shown (Table IV) to be significant in both sets of data. Some such selection in cooperation in a poll has been discussed, but its actual extent had not hitherto been actually measured (2, 3, 4, 5).

TABLE IV

#### POLITICAL PREFERENCE AND RETURN OF BALLOT

	Total	Roosevelt	Landon	(diff)	Critical Ratio	P
Inst.	484	245 (56.8%)	239 (71%)	3.44	4.09	100
Return:						
C. R.	129	37 (14.7%)	92 (32.6%)	3.55	5.04	100

With respect to non-return of ballots by different party supporters, no important differences appeared, i.e. in the reasons advanced.

*Attitude toward Digest poll.* On the theory that attitude toward the poll is indicative of degree of willingness to take it seriously, a check was made on the 553 Cedar Rapids respondents.



Inspection of Table V indicates that Landon supporters were more favorably disposed toward the poll, as were also those who returned ballots, compared to those who did not or were uncertain regarding return.

TABLE V  
ATTITUDE TOWARD DIGEST POLL  
(Cedar Rapids Survey)

	Rec'd-ret.		Rec'd-non-ret. or uncertain ret.		Didn't receive or receipt uncertain	
	Dem.	Rep.	Dem.	Rep.	Dem.	Rep.
Favorable	27 (71.9%)	77 (83.7%)	11 (24.4%)	20 (47.7%)	48 (28.2%)	75 (50.6%)
Neutral	1 (5%)	6 (30%)	2 (10%)	1 (5%)	6 (30%)	4 (20%)
Indifferent	2 (5.4%)	1 (1%)	14 (31.1%)	7 (16.6%)	77 (45.3%)	56 (37.8%)
Unfavorable	7 (18.9%)	8 (8.6%)	18 (40%)	14 (33.3%)	38 (22.3%)	13 (8.7%)
Total	37 (100%)	92 (100%)	45 (100%)	42 (100%)	169 (100%)	148 (100%)

*Economic selection in cooperation.* Persons in the higher income brackets have been found to be more apt to return mail ballots than persons in the lower brackets ranging from 40 per cent for those listed in *Who's Who* to 11 per cent in relief. This is substantiated in the results from both surveys shown in Table IV.

TABLE VI  
ECONOMIC STATUS AND RETURN OF BALLOT \*

	AV+	AV	P+	P
Institute	119 (68%)**	203 (63%)	48 (49%)	65 (55%)
Cedar Rapids	15 (47%)	79 (29%)	31 (15%)	4 (14%)

\*Minor parties not included.

\*\*Number and per cent returning ballot.

The foregoing considerations suggest these conclusions:

Those who had decided to vote Republican in the election tended to regard the poll as an opportunity to protest against the administration, likewise tending to regard the poll with more familiarity and esteem on account of their more favorable economic status; while those who had decided to vote Democratic in the election generally lacked incentive to voice their affirmation of the administration in a poll.

There was a Republican bias in the 1924, 1928 and 1932 polls, revealed by totalling the past preferences of those who participated in these polls.<sup>1</sup> This bias presumably arose from a consistent, but not high, relationship between Republicanism and higher economic status (represented by propertied persons with cars and telephones). The bias was considerably counteracted then by a greater proportion of return by Democrats on the mailing list, since theirs was the position during those years of a minority party protesting against the party in power.

In 1936, however, the marked increase in the relationship between Republicanism and higher economic status made for a greater Republican over-representation on the mailing list during the very year that the Republicans shifted vantage points with the Democrats, becoming a minority party to whom the poll represented an excellent opportunity to protest against the party in power.

Hence the two biases of over-representation of one party in the poll mailing list and disproportionate return by members of one party, did not serve to cancel each other as they did in 1924, 1928 and 1932, but *became cumulative* in 1936, contributing more than any other single cause to the failure of the poll to predict the election outcome. Other factors of course contributed; but this phenomenon alone indicates that in using the mail ballot in gathering data on social questions, close attention must be given to the current relative position of the "outs" and the "ins" to avoid an error which may assume considerable magnitude.

<sup>1</sup>Robinson, C. E., *Straw Votes*, New York, Columbia Univ. Press, 1932.

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